

. XII.  
er of In  
of the  
ney, Dr.  
of Chas.

by the  
ams, D.  
daughter  
at the  
by the  
Pa. Car.  
son, of

ber, N.  
als, No.  
of New  
rd Hale,  
James  
y, D. D.  
nn., and  
Eq., of

his city,  
U. S. A.  
oodwin,

Abraham

, at the  
, son of

Pepper,

idence is

daughter

and 11

16.

W.

1. Clear

st. High

Wind

40°

57

62

62

70

57.00

7 28.5

RECORDS.

to span

r running

10 to 11

30, Sept.

5, 22,

30, Febr.

16

16

16

16

16

16

16

16

16

16

16

16

16

16

16

16

## THE

# MEDICAL AND SURGICAL REPORTER.

No. 409.]

PHILADELPHIA, OCTOBER 29, 1864.

[VOL. XII.—No. 12.

## ORIGINAL DEPARTMENT.

### Communications.

#### THE PATHOLOGY AND TREATMENT OF BRONCHITIS;

With Cases selected from the Out-door Department of the Long Island College Hospital.

By ALEX. J. C. SKENE, M.D.,

of Brooklyn.

[Continued from page 167.]

It is an important point in the treatment of bronchitis to promote free expectoration, for by doing so the irritation is lessened. This is obvious to all who have given the slightest attention to the subject. We have evidence that the non-professional are aware of this fact by their so frequently asking for medicine to "loosen their cough" so that they may have relief. This relief from irritation when the expectoration becomes free is well illustrated in many cases of phthisis pulmonalis where the irritation gives rise to a very distressing cough during the incipient stage, but when the disease is more advanced and there is free expectoration the irritation becomes much less distressing. So much relief is obtained that patients often believe that they are fast recovering.

Though free expectoration relieves irritation in bronchitis, it may be questioned whether it favors recovery. I am fully persuaded that it does, as a general rule, and there are, perhaps, but few who doubt this point. There are cases, mostly occurring in old subjects, where there is a tolerably free expectoration and still no tendency to recovery, but the matter is usually of a mucus or sero-mucus character, and if by proper treatment the secretion can be changed to that of a purulent character recovery usually takes place. Hence remedies should be used with a view to that end. As we have cathartics which produce different effects on the alimentary canal, some causing increased watery secretion, others an increased flow of mucus, it is not unreasonable to suppose that the secretion from

the air passages might be similarly effected by medicine.

By way of testimony in favor of the iodide of potassium in bronchial disease several articles in medical literature might be referred to, but it will suffice to state that several leading members in the profession have expressed their belief that it is a very efficient therapeutic agent in chronic bronchitis, and in asthma and emphysema caused by bronchitis. Of the modus operandi of the remedy but little, if anything is said in medical literature. That the remedy proves curative by changing the character of the secretion is, we believe, indicated in the history of the following cases, though many more examples would be required to fully prove such an important point in therapeutics.

The conditions requiring the use of iodide of potassium may be briefly summed up as follows: In the second stage of acute bronchitis when unusually prolonged and attended with much irritation from the tenacious character of the secretion. In chronic bronchitis when there is a similar condition, and in asthma and emphysema when dependent upon, or increased by an accompanying bronchitis.

*Case 1st.* J. C., aet. 28, was taken ill on the 6th of August, with a feeling of heat and irritation in the chest and throat, and had slight febrile symptoms. On the evening of the sixth he became a little hoarse and began to suffer from cough without expectoration. The hoarseness increased so that on the eighth his voice was scarcely audible. The cough continued, and the expectoration, at first mucus, became purulent on the ninth and tenth days; the voice by that time was normal.

About the twelfth the expectoration again became mucus in character, but the cough continued. On the fourteenth the expectoration was scanty, but the cough and bronchial irritation was more severe than ever. Up to this date the patient had taken no medicine.

Prescribed potassii iodidi gr. v. three times daily.

Soon after commencing to use the medicine the expectoration became darker in color and

freer, and the irritation decreased. In a short time the expectoration became quite free requiring but little coughing to throw it off. The symptoms gradually subsided, and on the eighteenth the patient was considered to be fully recovered. The patient stated that the matter expectorated tasted like the medicine.

*Case 2d.* H. C., at. 40, was attacked with bronchitis about one year ago, and has been subject to a severe cough and dyspnoea occasionally since. On the 18th of July she presented herself at the college clinique suffering from bronchitis and emphysema affecting the apex of the left lung. She had a very distressing cough and dyspnoea. There was but very little expectoration.

Prescribed potassii iodidi gr. v. three times a day.

The patient returned on the 25th of August and stated that she had continued to use the remedy as directed, and shortly after the expectoration became freer and darker or more purulent. There is a marked improvement in the patient's condition; she has less cough and breathed freer than at any time during the last year.

On August the third she was exposed to cold which caused a return of the symptoms. Renewed the prescription of iodide of potassium. She soon recovered from the slight relapse and continued in a very comfortable condition until September 14th, when she called again at the clinique on account of a return of the cough. She was also suffering from constipation. She was prescribed for but has not returned since.

*Case 3d.* T. C., at. 9 months, had a cough for four weeks, when he was brought to the clinique on the 7th of September. The patient appeared to be in tolerable health, but was hoarse and had a very troublesome dry cough which made him fretful. An examination of the chest revealed nothing abnormal except bronchial râles which were to be heard at all parts of the chest, but were not very marked.

Prescribed potassii iodidi gr. xxvij.

Aquæ fʒij. M.

Teaspoonful three times daily.

The patient continued the remedy until the 12th of September when he was brought back to the hospital. The cough had become much less severe and in the language of the patient's mother was looser. Though he did not expectorate it appeared that the secretion gave rise to very little irritation, and was easily detached from the membrane by the act of coughing. The patient was brought again on the 14th of

September when he was almost free from all bronchial trouble.

*Case 4th.* W. C., at. 44, has been subject to bronchitis at least once every year for the last eight years. The attacks generally lasted for about six weeks at a time and were attended with a very severe cough and an expectoration of clear tenacious mucus. He applied for treatment on the 12th of September, having had his old complaint there for about ten days. He had slight dyspnoea, and was suffering from the same form of cough and expectoration, which were the usual accompaniments of his former attacks. He was constipated, his appetite was poor and his tongue coated. An examination of the chest revealed the presence of bronchial râles at nearly all parts of the chest, but no other signs of disease.

Prescribed Pil Cathartici comp. No. iij, to be taken at night, and

Potassii iodidi	3ij.
Aquæ	fʒij.

Teaspoonful to be taken three times daily an hour after meals, commencing twenty-four hours after taking the pills.

The patient was seen again on the 16th of September. He repeated that the pills acted freely, and that his bowels were then more regular, and his appetite improved. After using the medicine for a short time the expectoration became darker in color and less tenacious, and was raised with much less trouble. His respiration was freer and his cough less severe. On the 21st of September the patient reported that he was entirely free from the bronchial trouble and in good health generally. He also stated that he had been repeatedly treated for the same trouble in this country and in Europe, but never before obtained so complete a relief in so short a time.

*Case 5th.* M. H., at. 3 years, had a dry cough for six months. At times she is comparatively well but never wholly free from the cough. The patient does not expectorate much but occasionally throws off a little clear tenacious mucus. Her general health is tolerably good. Mucus râles heard at various parts of the thorax, were the only physical signs of disease obtained by an examination of the chest.

On the 24th of August the patient was ordered to be taken out of doors as much as possible, and to have a good nutritious diet. Prescribed, as follows:

B. Potassii iodidi	3ss
Aquæ	fʒij.

A teaspoonful to be taken three times daily.

The patient was seen again on the 29th of August when it was found that the expectoration had not increased, but it was darker in color appearing like opaque mucus. The cough was much more moist and less troublesome. The appetite was better and the health and comfort much improved. Continued the treatment and ordered the patient to return in five days if she had not entirely recovered. As she did not return she most likely got well.

From the 29th of March to the 23d of September, 1864, we have treated eighty cases of bronchitis in the Out-door Department of the Long Island College Hospital, but have only kept a full history of a few of them, from which the above cases were taken. In about thirty of the cases the iodide of potassium was used, and in most of them the remedy had the same effect, as in those which are here recorded, viz: it changed the secretion to a darker color and rendered it more easily detached from the membrane, and by doing so gave relief from the cough and irritation.

From these facts, and from observations made on its use in other forms of bronchial disease, it appears to me that the proper employment of the remedy consists in limiting its use to those forms and conditions of bronchial disease which have been named above.

There are many cases where there is a cough and bronchial irritation in which its employment is useless. Cough arising from a tuberculous deposit in the lung tissue would not be relieved by its use; and though asthma caused by bronchitis would likely disappear on its administration, yet the same disease caused by some irritation of the nerve centres would not. Nor is it always necessary in simple acute bronchitis since that disease usually tends to a speedy and favorable termination and requires no special medication to arrest its progress or modify its course. It is only when certain circumstances occur which tend to retard recovery that the iodide of potassium can be used as an important therapeutic agent.

---

#### ACCIDENTAL PERFORATION OF THE INTESTINE,

By an Elastic Bougie used by the Patient for Dilating a Stricture of the Rectum; resulting in death in Twenty-six Hours.

By THOS. C. MOFFATT, M.D.,

Physician-in-chief at the Seamen's Retreat, Staten Island, N.Y.

The following case which it recently fell to my lot to treat, strikes me as in many respects

unique, and as such I send the following account of it to your widely read and popular journal with the hope that it may prove useful by adding somewhat to the stock of general knowledge on the subject of which it treats. The patient, Mrs. S. had been for several years up to 1860, under my care for treatment of a variety of infirmities, the principal one among which were ulceration of the rectum and stricture of the same. She began to be afflicted in this way, if my memory serves me, some time during the year 1852, and had taken a great many remedies, for what she supposed was the piles, with little or no benefit.

On making an examination of the part I discovered that there was a narrowing of the canal about an inch from the anus so great that I could only insert the point of my index finger. She suffered great pain in defecation especially when her bowels were constipated, and had almost constantly with every movement a sanguineo-purulent discharge. Her faecal passages indicated by their small ribbon-like shape, the nature and extent of the constriction in question. I procured for her several elastic bougies of different sizes which she used with increasing benefit while she remained under my care, and directed her to use also various stimulating and astringent enemata.

She left this place about four years since and resided, up to March last, in the vicinity of Albany. She consulted various physicians for this and other difficulties and was, for some months, and with much benefit, under the care Dr. Jno. SWINBURNE, formerly of Albany, now Health Officer of the port of New York. She still continued with the approval of her medical advisers the occasional use of the bougies and injections, as she always found more relief from these than anything else. She suffered also very much from frequent attacks of synovitis of the knee-joints which often confined her to her room. Since the latter end of March up to the date of her death, she resided at the Retreat and enjoyed for the most part comfortable health. She was accustomed to regulate her bowels by the use of tepid water enemata.

On Friday morning, September 2d, I was called to see her and found her suffering very much from what she called an attack of colic. She stated that she had arisen at her usual hour, feeling as well as common, and after taking a bath, had used the bougie as she had been wont to do; that immediately afterward the pain in question seized her, and she lay down on her bed without completing her toilet. A member

of the family hearing sounds of distress, went to her room and found her as has been stated. She made quite light of the matter—thought she should soon be better, and said she would quickly get up and dress herself. After the lapse of half an hour, the same person hearing her groans, went again to her room, and finding her no better, but rather worse, ran at once for me.

I found her in the condition before described, I observed that her features were pinched, and although she sought to conceal her sufferings, which were very intense, they were palpable enough in her countenance. She referred the pain wholly to the hypogastrium. I immediately gave her a warm soap suds injection, and a full dose of the elixir of opium. Ordered a sinapism to be applied and left. In about half an hour I was summoned again to find her sufferings much more aggravated. She was then screaming and tossing from side to side in the utmost agony, imploring something to relieve her. The elixir was repeated and a bag of hops steeped in hot water was laid across the seat of the pain. Chloroform by inhalation was given in sufficient quantity to allay the extreme suffering, and she was kept for some time partially under the influence of the anaesthetic.

The hot fomentations together with repeated doses of the opiate and anaesthetic relieved her somewhat—rather rendered the pain endurable, but did not remove it. She found some comfort also in remaining for a considerable time in a hot sitz bath. After a few hours her extremities became cold, her pulse feeble and very rapid; the abdomen tympanitic and excessively tender to the touch. The hot applications were kept constantly applied as she expressed herself somewhat relieved by them, but her general symptoms grew more and more grave, betokening a speedy end to her sufferings.

I was very much at a loss to account for this sudden and alarming illness. Dr. J. R. BOARDMAN, a near neighbor, was summoned on Saturday morning at two o'clock, to meet me in consultation. Mrs. L. was then too feeble to communicate except by signs. She did not seem to suffer very much, except with every attempt to change her position. The "facies Hippocratica," hurried respiration, icy coldness of almost the entire surface, and at times imperceptible pulse, left us but one conclusion in the matter of progress. She lingered until nine o'clock on Saturday morning, and expired just twenty-four hours from the time when I first saw her. At three o'clock, P. M. on Sunday, Sep-

tember 5th, in the presence of Drs. SWINBURNE and BOARDMAN, and assisted by Dr. WASHBURN I made a post-mortem examination.

The abdomen was found distended with gas which was exterior to the intestines, and particles of faecal matter were found floating in an abundance of sero-purulent fluid. The peritoneum lining the walls of the abdomen was roughened and of a dark lead color, that covering the intestines was also rough and discolored. In the left ovary was found attached a sac of the size of a small orange filled with serum and two or three small cysts on the opposite side. The bladder, womb and appendages were removed and the lower end of the colon, sigmoid flexure and rectum were carefully examined. At the distance of about eight inches from the anus, and just at the junction of the rectum with the sigmoid flexure of the colon there was found an aperture in the side of the gut corresponding precisely in size with the bougie which she had used. The stricture was not as it often is in that locality of a scirrhus character, but was probably the result of the cicatrization of ulcers of which there were several situated above and adjacent to it.

This accident which proved so suddenly fatal in the case of this estimable lady can be explained, it appears to me, as having occurred in one of two ways. In the first place it is possible that she may have fallen backward while sitting upon her feet and inserting the bougie, thus bringing the whole weight of her body upon the instrument. The fact of her lameness and weakness of the knee-joints add plausibility to this supposition. But why if this occurred did she not mention it? Or it might have occurred in this wise: finding that the instrument had met with an obstruction she determined in a fit of desperation to overcome the obstacle, imagining that it might be perhaps another stricture, and so used greater force than she was aware of, and greater than the intestinal coats could withstand.

It seems scarcely possible that an elastic bougie measuring about half an inch in diameter rounded and perfectly smooth at the end could be made by the person using it to penetrate the coats of the rectum; rather I should suppose that the instrument would bend upon itself, or would tear away the sigmoid mesocolic attachments and carry the intestine before it. These instruments are in common use; they had been recommended to her by several medical gentlemen who had examined her case, not one of whom I suspect ever imagined that such an

accident might occur. This case proves, at least, that it is possible to perforate the bowel with the bougie and that therefore some degree of caution should be exercised in the use of this instrument. It is not unlikely that in this case the intestinal walls were softened and perhaps ulcerated at the point of perforation, although nothing to indicate that this was so could be seen.

## Hospital Reports.

JEFFERSON MEDICAL COLLEGE, }  
Oct. 1864.

SURGICAL CLINIC OF PROF. S. D. GROSS, M.D.

Reported by John P. Shrader.

### Scirrhous of the Mammary Gland.

Miss W., at. 35 years, has a tumor in the left mammary gland which commenced about six months ago. When first discovered it was about the size of a walnut and has increased until the whole gland has become involved. It is semi-globular in shape and remarkably hard. The nipple is quite prominent and retracted, which is an invariable concomitant of this affection and surrounding it is a gutter, another marked symptom of the disease. The skin in this vicinity presents a peculiar wilted appearance, not unlike the surface of a tanned hog's hide. Toward the upper portion of the gland there is a small cutaneous tubercle of secondary formation. The lymphatic glands of the axilla are in a state of enlargement. The patient complained of indigestion, which is usually a marked symptom in these cases. The pain is of a sharp shooting, stabbing character mostly confined to the affected structures. Scirrhous of the mamma usually appears about the decline of the mense; without any assignable cause. No doubt long continued grief, anxiety, and mental distress may sometimes provoke its formation.

In regard to the treatment of this case there are four reasons for not removing the gland by an operation. First the rigidity of the parts and retraction of the nipple; second, the age of the patient; third, the involvement of the glands of the axilla; and, lastly, the emaciation and failure of the general health. All, in fact, that can be done is to palliate symptoms. When great congestion exists, a few leeches may be advantageously applied. Various unguents and plasters may be employed to soothe the parts and allay pain. The opium or belladonna plaster, or belladonna plaster with morphia constitutes an excellent remedy. The secretions must be properly corrected. A few grains of calomel or its equivalent of blue mass may occasionally be given with advantage. Never purge much.

If the patient cannot sleep, anodynes must be exhibited.

The diet must be carefully regulated. It should consist of substances that are easy of digestion and that contain a large amount of nutritious matter such as vegetables, milk, bread, and potatoes. When the system is debilitated; chicken, lamb, mutton, oysters, and fish, form excellent articles of diet. When the strength is greatly exhausted, milk punch, porter, whisky, brandy, and other stimulants may be used along with exercise in the open air; while the patient should endeavor to cultivate a cheerful and resigned disposition.

### Dislocation of the Shoulder-Joint.

T. M., 31 years of age, a soldier from one of the United States Army Hospitals in the neighborhood of this city, is subject to frequent luxations of the shoulder-joint, resulting from an injury which he received by loading boxes in a wagon about two years ago. Since that time he has suffered from sixteen different dislocations, the last one occurring about a week ago. The patient states that they are liable to occur in any direction. He was sent to the clinic to obtain advice in regard to his condition. The treatment recommended was perfect quiet and a series of blisters to the shoulder followed by the hot and cold douches.

### Double Scrotal Hernia.

T. C., at. 3 years, has been the subject of a double scrotal hernia, of extraordinary size, ever since he was three weeks old. The appearance of the tumor is that of two cylinders lying side by side with a central groove between them near the middle of which the penis is so deeply imbedded that only the prepuce is visible. The two tumors are five and a half inches in length, by seven inches in circumference. They are soft and yielding, and may be reduced with facility. At the bottom of each cylinder the testicle is to be distinctly felt.

Owing to the enormous size of the abdominal ring, a radical cure by means of the truss is out of the question. The only treatment likely to produce such a result would be to expose the rings, refresh their edges and unite them with metallic wires on the principle of the operation for hare lip. For the present a truss was ordered to retain the bowel in its position in the abdomen.

### Ununited Fracture of the Leg.

F. F., at. 29, of Port Clinton, Pa., is affected with an ununited fracture of the tibia and fibula. The accident which produced the fracture occurred on the 5th of October, 1863. The injured limb is about one and a quarter inches shorter than the sound one, and the foot is curved or turned out. Upon examination the fracture is found to be very oblique. Partial union has taken place; the fragments are still movable,

the ends overlapping to some extent. The indication in the treatment of this case is to create a sufficient amount of inflammation in the parts necessary to induce the fragments to throw out a sufficient amount of osseous matter to insure their reunion. For this purpose three ivory pegs were introduced into the tibia in the direction of the line of the fracture. They are to be retained until there is reason to believe that they have excited the requisite degree of ossification. Should the inflammation which follows prove too great, the usual means for controlling it are to be employed.

## EDITORIAL DEPARTMENT.

### Reviews and Book Notices.

**Diseases of the Ear, their Diagnosis and Treatment. A Text Book of Aural Surgery, etc.** By Dr. ANTON VON TRÖLTSCH, University of Würzburg, Bavaria. Translated from the German, and edited by D. B. ST. JOHN ROOSA, M. D., Assistant Surgeon to the New York Eye Infirmary. One vol., pp. 254. Illustrated. William Wood & Co., 61 Walker street, New York. Price \$2 00.\*

This work, as the title indicates, is a compendious and comprehensive series of learned lectures on diseases of the ear and adjacent parts. The name of TRÖLTSCH is sufficiently well known to carry with it confidence and interest. Difficult as may appear the anatomical philosophy of hearing, to the attentive student this volume will prove a vade mecum, while it fills the mind with countless useful suggestions, statements of facts and important data as to treatment. So simple is the style; so free from ambiguous expressions, that while the physician learns his lesson, his memory is neither clogged by superfluous words nor is his intellect confused by protracted disquisitions. A thorough investigation of causes, immediate or otherwise, cannot be too highly appreciated in this day of superficial quacks and advertising theorists. Constitutional treatment, moreover, is carefully recommended in many instances when topical applications would only bring about a temporary alleviation.

The illustrations are of a character to be noticed particularly. Strictly correct, of the most modern pattern, and with easy explanation as to their mechanical superiority, they must necessarily prove of vast assistance in facil-

tating the operations of the practitioner and affording permanent relief to those whose aural organs are dulled from various causes or inflamed by insidious disease.

As a translator, Dr. ROOSA deserves honorable mention. He has endeavored to follow out conscientiously the exact meaning of the German physician's words. At times a Teutonic idiom reminds us that the work was not originally written in English; but this foreign flavor is not unpalatable. On the contrary, in not a few instances, it fixed more firmly upon the mind the exact idea of him who utters soundest doctrines and approved opinions. To those desirous of following particularly the most successful treatment of catarrh of the pharynx, otitis interna, aural polypi, nervous deafness, the important use of the Eustachian catheter, and the danger of being careless while introducing it and the many peculiarities of the auditory canal, this series of practical aphorisms will prove of lasting benefit. The editorial remarks are very apposite and instructive.

S. W. F.

**Gunshot Wounds and other Injuries of Nerves.** By S. WEIR MITCHELL, M.D., GEORGE R. MOREHOUSE, M.D., and WILLIAM W. KEEN, M.D., Acting Assistant Surgeons, U. S. A., in charge of U. S. A. Wards for Diseases of the Nervous System, Turner's Lane Hospital, Philadelphia. Philadelphia: J. B. Lippincott & Co., 1864.

The establishment of a special hospital for the reception of a single class of cases, in connection with the military service, was certainly a novel idea, and one which, at first, would appear scarcely practicable to an extent sufficient to justify the undertaking. Especially would this seem to be the case with the class of derangements to which the Turner's Lane Hospital is devoted. But judging from the results as set forth in this brochure, the experiment has proved the sagacity of the thought, and from a large number of highly interesting cases there collected, under the joint observation of the authors, a series of important facts have been developed and classified, on a branch of surgical science hitherto but little cultivated.

This hospital for diseases of the nervous system, was organized in May, 1863, but it was soon found advisable to open its doors to the reception of cases of wounds and other injuries of nerves. Thirty-one cases are reported in the work under review, illustrative of almost every possible phase of nervous derangement, some of them of exceeding rare character, and involving separately and conjointly almost every main nerve trunk and an infinite variety of branches. Lesions of sensation, of function, of calorification, of volition, of muscular movement, etc., are noted and well-described, throwing a flood of

\* A notice of this work was prepared for our pages some months ago, and we were under the impression that it had appeared, but it seems to have been mislaid and lost.

ED. MED. & SURG. REP.

light upon many hitherto quite obscure points of physiology and pathology.

It is a very readable volume, and the following passage will show the manner of presenting a topic. Alluding to a rule adopted by them, the authors state that "We shall, therefore, adhere to the rule which has governed us throughout, and only treat fully of points which are novel, or upon which our own clinical experience enables us to cast a clearer light. For these very reasons we have here set apart for distinct consideration that kind of pain which we have before spoken of as a burning pain. It is a form of suffering as yet undescribed, and so frequent and terrible as to demand from us the fullest description. In our early experience of nerve wounds we met with a small number of men who were suffering from a pain which they described as a "burning," or as "mustard red hot," or as "a red hot file rasping the skin." In all these patients and in many later cases, this pain was an associate of the glossy skin previously described. In fact, this state of skin never existed without burning pain.

"Recently we have seen numbers of men who had burning pain without glossy skin and in some we have seen this latter condition commencing. The burning comes first, the skin changes afterwards; but in no case of great depravity in the nutrient condition of the skin have we failed to meet with it, and that in its forms of almost unendurable anguish. The terms here used may seem strong to those who have not encountered these cases.

"The seat of the burning pain is very various, but it never attacks the trunk; rarely the arm or thigh and not often the forearm or leg. Its favorite site is the foot or hand. In these parts it is to be found most often where the nutritive skin changes are met with; that is, on the palm of the hand, or palmar face of the fingers, and on the dorsum of the foot, scarcely ever on the sole of the foot or the back of the hand. Where it first existed in the whole foot or hand, it always remained last in the parts above referred to, as its favorite seats.

"The great mass of sufferers described this pain as superficial, but others said it was also in the joints, and deep in the palm. If it lasted long it was referred finally to the skin alone.

"Its intensity varies from the most trivial burning to a state of torture, which can hardly be credited, but which reacts on the whole economy until the general health is seriously affected.

"The part itself is not alone subject to an intense burning sensation, but becomes exquisitely hyperesthetic, so that a touch or a tap of the finger increases the pain. Exposure to the air is avoided by the patient with a care which seems absurd, and most of the bad cases keep the hand constantly wet, finding relief in the moisture rather than in the coolness of the application. Two of these sufferers carried a bottle of water and a sponge and never permitted the part to become dry for a moment.

"As the pain increases the general sympathy becomes more marked. The temper changes and grows irritable, the face becomes anxious and has a look of weariness and suffering. The sleep is restless and the constitutional condition reacting on the wounded limb, exasperates the hyperesthetic state, so that the rattling of a newspaper, a breath of air, another's step across the ward, the vibrations caused by a military band, or the shock of the feet in walking, give rise to increase of pain. At last the patient grows hysterical, if we may use the only term which covers these facts. He walks carefully, carries the limb tenderly with the sound hand, is tremulous, nervous, and has all kinds of expedients for lessening his pain. In two cases, at least, the skin of the entire body became hyperesthetic when dry, and the men found some ease by pouring water into their boots. They said, when questioned, that it made walking hurt less; but how or why, unless by diminishing vibration, we cannot explain.

"One of these men went so far as to wet the sound hand when he was obliged to touch the other, and insisted that the observer should also wet his hand before touching him, complaining that dry touch always exasperated his pain. Cold weather usually eased these pains; heat and the hanging down of the limb made them worse. Motion of the heart was unendurable in some of the very worst cases; but for the most part it did no harm unless so excessive as to flush the injured region.

"The relations of burning pain to altered nutrition have already received attention from us. It appears quite certain that in cases of glossy skin, burning always exists. It is also certain that it may exist without association with diseased skin; but that in these instances the evidences of depraved nutrient states will be very likely to follow upon the pain, should that symptom last very long.

"The temperature of the burning part we have always found to be higher than that of the surrounding parts, or than that of corresponding points on the other half of the body."

---

**The Physician's Hand-book of Practice for 1865.** By WILLIAM ELMER, M.D. New York, W. A. Townsend, Publisher, 1865. Price \$1 75, with the REPORTER \$1 50.

This edition of this useful and widely-known visiting list and manual of practice has been entirely revised, and much new matter added. It contains: 1, A Classification of Diseases; 2, Ready Method in Asphyxia; 3, Poisons, their Symptoms and Treatment; 4, Diagnostic Examination of the Urine; 5, The Pulse; 6, List of Incompatibles; 7, Medicinal Weights and Measures; 8, Abbreviations and Definitions; 9, Materia Medica; 10, Extemporaneous Prescriptions. Then follow Diary, Record of Practice and Treatment, Memoranda, etc., etc.

## MEDICAL AND SURGICAL REPORTER.

PHILADELPHIA, OCTOBER 29, 1864.

## THE SURGICAL USE OF ANÆSTHETICS.

We have brought to a close a discussion commenced some months ago in our pages, of the merits of the claim of W. T. G. MORTON to the discovery of the application of anaesthetics to surgical uses. On this pretended claim, MORTON has been urging upon Congress the appropriation of some two hundred thousand dollars as a remuneration for his sacrifices in prosecuting his discovery and as an acknowledgement of the benefit he conferred on the army and navy. On the same ground he also levied contributions to a heavy amount on the medical profession, and obtained many signatures to a written testimonial awarding to him in the opinion of the signers, the merit of the discovery.

Knowing that there was evidence to show that these pretensions were not well founded—that so far from being the discoverer of the application of anaesthetics to surgical uses, MORTON had basely appropriated the discovery of another, and had imposed upon the medical profession and the public, and was engaged in a gigantic attempt to impose on the Government, we determined that the facts should be plainly set forth, and the scheme defeated. In this, as error must always shrink before truth, we have succeeded so well that we doubt whether he will ever dare to appear again before Congress with his claim, or attempt any longer to hang on the skirts of the medical profession, from whom he deserves nothing but contempt.

In a series of eight or ten powerfully written communications published in our pages, it has been shown beyond the possibility of cavil, that MORTON *was not*, and that HORACE WELLS *was* the discoverer of the application of anaesthetics to surgical uses. These articles, remarkable for their scope, and the clearness of their argument and statements of facts, have been read by thousands of the medical profession with the greatest interest and attention, and have most effectually subserved the cause of truth and justice.

We are glad to know that the articles are to be revised and published in book form. During the late session of Congress, we, at our own expense, furnished copies of the REPORTER, containing the communications as they appeared, to many of the members, and should the subject ever again be agitated before that body, it will

not be a difficult thing to put a quietus upon it by placing these articles before the members. And MORTON will find that he will have to meet the facts of the case face to face. Facts are stubborn things, and here is an effectual barrier to any further imposition on his part on the medical profession, or on the people of the United States, or other nations either, for if he had succeeded in procuring a grant from our Government, we believe he would have made it the basis of levying contributions on the medical profession and the Governments of other countries.

This discussion has occupied a good deal of space in our columns, but the subject was one of great importance, because truth and justice were at stake, many in our profession had been unwittingly placed in a false position, and a determined effort was being made to procure from our Government, at a time when it could ill afford it, a heavy amount of money, which, if appropriated at all, should, by all the principles of right and justice, take an entirely different direction. The object is attained. The game is blocked. Our profession is vindicated. Truth and right and justice are vindicated. The treasury is not depleted by a malappropriation of a large amount of its funds. And lastly, our readers have had a decided treat in a series of well-written argumentative papers on a very interesting subject.

## VACCINE VIRUS.

We have often been asked whether we could not supply vaccine virus from the original source—taken directly from the cow. It is not often thus obtained in this country. In London we believe the Jennerian Society keeps a constant supply of it, and furnishes it gratis to the profession. Last year we tried to obtain some from that society, but failed. Through the kind consideration of Dr. S. E. WILLS, of Maryland, we have lately had it in our power to distribute a large quantity of excellent vaccine matter the first remove from the cow, to many of our subscribers in different parts of the country. We are not of those who believe that the virus degenerates by passing through the human system, but as there are those who desire to obtain it occasionally fresh from the cow, we are happy to be able to distribute a large supply in which we have full confidence. Returns from this supply will enable us to furnish to others virus the second remove from the cow.

While on this subject we would remark that

the profession of England notice with surprise the advertisements in our medical journals of parties proposing to *sell* vaccine virus. In England, through the Jennerian Society, and in other ways the profession is always supplied gratuitously. We believe that the only general source of gratuitous supply of vaccine virus in this country is through our office. Any subscriber to the *REPORTER* by inclosing a postage stamp will receive from us by return mail, if possible, a supply of fresh virus. They are expected to send some of the product in return, that we may be enabled to supply others on the same terms. When we have a surplus stock, which occasionally happens, we send it to the Surgeon-General's Office for use in the army. Occasionally it happens that through the neglect of friends to return a supply to us, ours becomes exhausted, and when that has been the case, we have sometimes found it difficult to buy a good article. We trust the profession will see to it that we are not often driven to the necessity of purchasing vaccine matter. We shall always respond as promptly as possible to all demands for virus, and only ask a prompt return of the compliment.

## Notes and Comments.

### Military Medical Studies. i

The *Army and Navy Journal* says: "Dr. W. ROTH, a well-known staff physician in the Prussian army, has recently published an interesting work entitled *Military Medical Studies*, founded upon his experience at the Military Camp at Châlons. It is illustrated with a number of excellent wood engravings, and an accurate plan of the camp. The work is of special interest and importance, and we should be glad to have it translated and republished in this country. As a description of the finest military camp of instruction in the world, combined with judicious criticism and excellent suggestions, the work of Dr. ROTH has no superior."

### Manual of the Corporation of New York for 1864.

By a note from Mr. DAVID T. VALENTINE, the venerable and faithful Clerk of the Common Council of the City of New York, we are informed that the copies of the *Manual of the Corporation for 1864*, which were offered the members of the American Medical Association

in June last, will be ready for distribution in a short time, to those whose names were entered as desiring it.

This Annual is a handsome volume, the whole series giving a pretty complete history of the Metropolitan City, from year to year; illustrated by engravings of its most interesting buildings, parks, avenues, etc. The series consists, at the present time of about a dozen volumes, (we know not the precise number) and its style of "getting up," is a marked illustration of the regardlessness of expense in such matters which characterizes the government of New York. Mr. VALENTINE is the compiler of the work, and has earned the title of a philosophic antiquarian as well as a faithful recorder.

## Correspondence.

### FOREIGN.

#### LETTERS FROM DR. W. N. COTE.

September 2nd, 1864.

#### Animal Poisons.

Dr. GAILLOUSTE has recently published a paper on the insufficiency of the means commonly employed against the bite of mad dogs and the sting of venomous reptiles. In his opinion, cupping effected on the wound is greatly to be preferred. The secretary of the Academy of Sciences, to whom the communication had been made remarked, however, that cupping had already been tried and a report been presented on the subject to the Academy, in which it was shown that in most cases the effect of this operation was only suspensive, that is, that it prevented the absorption of the veins until other therapeutic agents could be procured to destroy it.

#### Dr. Bonialsky.

The well-known Russian Anatomist and Surgeon, Dr. BONIALSKY, lately solemnized his fiftieth anniversary of service in the army, by presenting to the Medical Academy of St. Petersburg his collection of instruments of surgery gathered with unwearied patience during half a century, and containing more than three thousand objects, all bearing the marks of the best fabrics in the world. It forms of itself a remarkable museum, where the progress made during the present century in anatomy and surgery can be studied with advantage.

**International Medical Conference.**

The deliberations of the International Medical Conference at Geneva, have terminated in the conclusion of a convention in ten articles which affirm the neutralization of all military hospitals of the whole official medical staff, and of the wounded. The Governments which took part in the negotiation not having all been able to send in due time to their commissioners the powers necessary to proceed to the signature of this diplomatic act, twelve States only figure therein as contracting parties, namely, France, the Grand Duchy of Baden, Belgium, Denmark, Spain, the Grand Duchy of Hesse, Italy, Holland, Portugal, Prussia, Switzerland, and Wurtemburg. But the protocol having been left open there is every reason to hope that all the other powers will soon accede to the convention.

**Microscopic Examination of the Air of a Marshy District.**

Never has the microscopic world been investigated with greater assiduity than at the present moment, owing to the dispute on spontaneous generation, and facts are thus brought to light which are extremely curious in themselves independently of the main question.

In a paper addressed to the Academy of Sciences, Dr. LEMAIRE describes certain experiments of his effected on the water obtained from spontaneous evaporation, by placing tubes over stagnant pools, cultivated fields or beds in the Sologne, Romainville, and the Garden of Plants respectively. The water obtained in the Sologne near St. Viatre, a place where marsh fevers are endemic, was at first colorless and limpid; its taste was similar to that of the adjoining pools, and it exercised no action on test-paper. Under the microscope it was found to contain spherical, ovoid, and fusiform spores, and then a large number of pale cells of various dimensions. There were besides a good many small semi-transparent bodies of various shapes. The condensed liquid was put into contact with an equal volume of air at the ambient temperature (about 25 deg. centig.) in a phial hermetically closed. Fifteen hours later some of the small cells began to bud; a drop of the liquid placed under the microscope, was found to contain upward of two hundred bacteria of the *termo* species. After a lapse of twenty-five hours more the liquid became dull; it contained bacteria, spinilla, vibrios, and monads crowded together in vast numbers. The number of small semi-transparent bodies above-mentioned had considerably diminished, which would lead to the conclusion that the

animalcules proceeded from them. Sixty hours later the liquid was cloudy and had a putrid smell. The animalcules were motionless, and tangled together in masses. There were cells strung together with ramified tubes mixed with spores. Meanwhile other infusoria of the same kind as the above continued to be in motion.

On the fourth day the number of spores, cells, and tubes began to diminish, and soon disappeared entirely. The animalcules also gradually disappeared, first becoming immovable, and about a month later a few monads only were in existence. It appears that the vegetable spores, cells, and tubes, were first devoured by the animalcules, and that afterwards the monads eat up the other infusoria; when these are exhausted, the smaller monads fall a prey to the large ones, which remain masters of the field.

From his observations, Dr. LEMAIRE arrives at the practical conclusion that where marsh fevers exist, as in the Sologne, the air contains a vast number of minophytes and microzoaria. While at Romainville the air of which is salubrious, very few of these minute creatures are to be found.

**Statue to Baron Larrey.**

The Department of the Hautes-Pyrénées celebrated, two weeks ago, the inauguration of the statue erected at Tarbes, to the memory of Baron Larrey, Surgeon-in-chief of the armies of the First Empire. On this occasion an admirable speech was made by Dr. JULES CLOQUET, in the name of the Academy of Medicine. He dwelt with great eloquence on the great qualities, genius, patriotism, and eminent services of the great man whose memory they had met to honor, and was most enthusiastically cheered by the multitude. The son of Baron Larrey, who is now at the head of the Army Medical Department was present at the ceremony.

**Origin of Man.**

Many naturalists have been and are still of opinion that we are neither more nor less than descendants of the genus *Simia*, in other words, highly organized monkeys. Dr. GRATOLEY supports a contrary opinion in a paper addressed to the Academy of Sciences. Having had an opportunity of dissecting a large chimpanzee from equatorial Africa, differing in some respects from the *Troglodites niger*, his attention was particularly attracted to the structure of the hand in this species, which naturalists have classed among anthropoid monkeys. The hand however presents such typical differences between man and the animal under consider-

ation, which belongs to the higher order of monkeys, as considerably to weaken the arguments adduced in favor of the close alliance between our race and that of the *Simiae*. While in man there is a large independent muscle which affords free motion to the thumb independently of the fingers, the thumb in the monkey is moved by an oblique division of the common tendon of the flexor muscle of the other fingers, so that it bends together with the latter, and is not independent of them. I need not enter into other details which are besides abundantly developed in most works on human physiology.

#### Poisoning by Tobacco.

DR. GALLAVARDIN in speaking of the fact communicated to the Academy by Dr. NAMIAS, and which I mentioned in a former letter concerning a smuggler nearly poisoned to death by concealing a quantity of tobacco about his person under his shirt, mentions three similar cases which occurred in 1801, 1844, and 1854. The first was that of a whole squadron of cavalry, the men having covered their bodies with tobacco leaves with a view to smuggle them across the frontiers. Though they were all inveterate smokers, they all experienced headache, vertigo, and sickness. The second case was that of a woman of fifty, who had done the same thing, and was in consequence attacked with nausea and vomiting, hiccup, oppression the chest, cold perspiration, chilliness, especially at the extremities, and a slow and intermittent pulse. In the third case, tobacco leaves with honey spread over them were applied to the limbs of a patient who was suffering from rheumatism. He experienced symptoms similar to the above, and the same phenomena have been observed where tobacco juice, or the leaf of the plant was applied to chronic eruptions, or upon parts where the skin had come off, or upon ulcers and sores. Hence DR. GALLAVARDIN concludes that tobacco under such circumstances produces symptoms similar to those it produces when absorbed in other ways.

W. N. CÔTE.

## News and Miscellany.

#### Condensed Milk.

The great value of this article, and its importance to the Union army, by whom enormous amounts of it are used, will commend the following account of its mode of preparation

(condensed from the *New York Tribune*) to the attention of our readers.

#### *The Milk Factory at Wassaic.*

Wassaic is the name of a station upon the Harlem Railroad, eighty-five miles from New York. It is on Wassaic creek, in Dutchess County. It was here that Mr. BORDER and his partners located in February, 1861, an establishment for the purpose of furnishing pure milk to those who desired it in New York City. To furnish it pure it was first necessary to purify and prepare the milk so that it would bear transportation, and keep pure and sweet after reaching the families of the consumers. For this purpose it is condensed, four quarts into one, by evaporating 80 per cent. of the water, and with it all impurities that affect the sight, taste, or smell, leaving the condensed article, containing all the casein, butter, and sugar, in the form and of the consistence of cream. This is condensed milk.

The company have this year contracts with somewhat over fifty farmers, for the daily delivery of 10,000 quarts of milk, six days in the week, at three cents a quart. It is required to be carefully strained and thoroughly cooled upon the farm by ice or cold spring water, some hours before it is hauled to the factory, because it will injure in close cans, if carried while it contains any animal heat. There are two receiving vats outside of the factory, under sheds, where the wagoners drive up and place the cans upon platforms. Here the first process in the purification commences. Each can is examined by the taster, who has acquired the same degree of skill that custom-house liquor-tasters have, and which enables him to determine whether the milk is sweet, or has been "extended" at the spring. Samples are often taken and set away in basins, properly marked, to prove the quality of each dairy. It is found that some farms naturally yield milk of a superior quality to others. The cows are generally what is called "native stock." Those which give the greatest number of quarts of milk in a year are the most valuable.

Beside the use of steam as a motor and heater, it is the great agent of cleanliness, which appears to be considered next to godliness in this establishment. It is a rule of this factory that everything that is used for milk once must be washed with steam and water before it is used again. The least particle of milk adhering to a vessel, and becoming sour, contaminates the next mess. It is on this account that they prefer to wash the farmers' cans, as it is impossible to do it as well with cold or hot water, as it is done by steam. Milk sent to the city in cans by farmers, is often injured by the neglect of those whose duty it is to keep the cans perfectly clean and sweet.

As soon as the cans are emptied, they are, one after another, turned bottom up on a stand and a strong jet of steam let on for a minute, and this is followed by a jet of water, which washes away every particle of adhering milk, and all the washings flow away into the creek.

The milk being strained and cooled at the farm, and brought in under cover of blankets and buffalo skins, is received at an average temperature, in Summer, of  $56^{\circ}$  to  $58^{\circ}$  degrees, and therefore it is a very unusual thing to find a can that has any taint of change. Owing to the thorough cleaning of the cans, it is impossible for the milk to become soured by the cause that often affects milk sent to the city—that is, souring of the cans after they are emptied.

Ice, as well as steam, being a necessity of the work, there is a large ice-house connected with the factory; and lately a complete cheese-manufacturing room has been added, so that, in case of any sudden decrease of the demand for condensed milk, as happened when the sutlers were ordered back from the front, the milk contracted for can be all received and converted into cheese.

#### *How the Milk is Condensed.*

We will start from the platform where the cans are received from the farmer, and take the reader step by step through the whole process.

If the cans "pass muster," they are immediately emptied through a fine cloth or strainer into the receiving vat, which holds a thousand quarts. From that the milk flows through a pipe, and is drawn into brass pails which hold fifty quarts each. These stand in a flat tub capable of holding sixteen of the pails at once, which is filled with water that is heated by a coil of steam pipe. Here the milk is heated to  $190^{\circ}$ - $195^{\circ}$ , and in this first process of the work of condensing lies the whole secret of success. This was the discovery of Mr. BORDEN. He was not the originator of condensed milk. It had been thought of and processes patented before the date of his patent, but all had failed, because the albumen of the milk, if boiled in open kettles, burnt upon the bottom, and if *in vacuo*, coated the pipes and vessel, preventing perfect condensation, and, if heated too high, giving an unpleasant odor to the condensed milk. When thus cooked upon the inside of the condenser, the albumen became an insoluble cement, which required great labor to remove, and which, if not removed, would spoil the next charge.

In this water bath, in these open pails, the albumen is coagulated, without separation from the watery portion of the milk, and a little portion that adheres to the pail is almost instantly removed by placing the pail bottom up over a steam jet, instantly followed by a strong water jet, in the same way that the farmers' cans are so perfectly cleansed. Until this plan was

adopted, the work of cleaning off the coagulated albumen was very laborious. Now it is almost instantaneous.

This first process requires but a few minutes, and two men stand ready to hook a tackle to the pails as fast as the contents reach the proper temperature, and hoist them out of the bath and empty them through a fine brass wire gauze sieve into what is termed a "steam well." This is a copper vessel shaped like an egg, standing on end, with about one-fourth of the upper end cut off. This holds about seven hundred and fifty quarts—six and a quarter barrels. This well is made with a steam jacket over the lower end, so that the milk, which is already heated almost to the boiling point, is soon brought to that degree, and is then ready to go to the condenser.

This first boiling in the open kettle appears to be another of the requisites in the preparation for the final operation, as it gets rid of something in the milk that tends to make it foam in the boiler; and if there is any defect in the condition of the milk, it is exhibited here in this open kettle, and the deposit of albumen that takes place during the first boiling is easily seen and cleared off between the changes. There are two of these steam wells, with their accompanying water baths and receiving platforms. From these the milk is taken by what is generally termed suction, through tinned iron pipes, to the floor above, where there are three condensers, or vacuum pans. These in form are somewhat like the steam well, the egg shape being complete—being four by five feet diameter, and holding one thousand quarts. In the upper part on one side, there is a window, through which strong sunlight, or lamplight, is reflected to the bottom, and opposite this there is an eye-glass, through which all the movements of the milk are seen, and by that means the boiling is regulated. There is also a manhole, through which a man enters after each charge is withdrawn, and scrubs the copper bright enough to almost see his face in it. The lid of the man-hole being screwed on, the pan is ready to commence receiving a charge. The first operation is to start a powerful double-action air-pump, which exhausts the air in the vacuum pan until the gauge shows twenty to twenty-five inches.

The cock in the pipe connected with the steam-well is now opened, and the milk rushes up to fill the vacuum. This pipe, by the by, is inserted into the milk from the top, and does not extend quite to the bottom, so that if any sedimentary matter has accumulated there from the boiling, it is not taken up to the condenser. As soon as the first charge is drawn up, more milk is prepared ready in the well for the next demand. The steam is now let on, heating the coil of pipe inside, and the steam jacket outside of the condenser, the pumps being kept in con-

tinal operation, and the milk closely observed by the intelligent Yankee girl (one of the "mud-sills"), one of whom has charge of each pan, and prides herself in keeping it and all around as neat as she does her person, and all are faultless. In a few minutes she observes the thermometer indicates  $190^{\circ}$  and that the milk in vacuo is boiling rapidly. In open air at this elevation it would require  $210^{\circ}$ , and could not have eighty per cent. of the water it contains removed, as is the case in the condenser.

As the boiling goes on, the milk continues to flow in, until 3,200 quarts have been taken up. Then the cock of the supply pipe is closed, and from this time the most watchful care of the attendant is required to keep the heat regular, and the pumps working perfectly.

The pumps stand upon the lower floor, where a stream of cold water flows upon the air chamber, and condenses the steam vapor drawn from the boiling milk into water, which is discharged into a stream constantly flowing through the building. This condensed vapor constantly emits that peculiar odor that we perceive in milk warm from the cow, or during the operation of boiling, and which contains the germ of putrefaction.

When the charge of 3,200 quarts shows by the gauge that it has been reduced to 800 quarts, it is ready for the final operation of purification. The steam is shut off, and its place filled with cold water, the singular effect of which is to instantly increase the heat of the milk to a very high degree. This is called superheating, and the effect is to throw off all the remaining odor, through the discharge of the pumps. This often has such a fetid, sickening smell, that it pervades the atmosphere all around, and affords one of the most convincing proofs of the value of the process that discharges such a substance from our daily food.

From the time the milk is received from the wagons until it is finished in the condenser, about three and a half hours are required for all the operations. It is then drawn into ordinary milk cans, and these are placed in an ice bath in the lower room, and require an hour and a half to become perfectly cold. It is now ready for shipment to the city. In summer time it is kept icy cold by means of an "ice core," that is a tin tube filled with ice, inserted in the cans, occupying about one-fourth of the space. Ordinarily, the milk drawn from the cows night and morning, is condensed during the day and shipped at night and delivered to city customers the next morning at thirty-two cents a quart.

It is a very curious fact that although only four quarts are condensed to one, when pure water is added to reduce the article again to milk, it is invariably found that it requires four quarts of water, and that the milk is then better than what is really pure milk, as drawn from the cows, and far better than much that is sold as pure milk.

The Wassaic factory has a capacity of condensing 17,000 quarts of milk a day, and during a part of the summer of 1864 has used 12,000 quarts a day. As the demand of city customers is only sufficient to take a small portion of this, the remainder is manufactured into "condensed milk preserved." Up to this summer such has been the demand for this article that the manufacturers have barely been able to supply it, and have therefore avoided rather than sought to have it advertised. This proves that there is need of extending the business. This, Mr. BORDEN is doing at Brewster's Station, thirty miles nearer New York, on the same road, where he has erected a building thirty-six by one hundred and sixty feet, with water power, and one condenser six by seven feet diameter, which is capable of condensing 20,000 quarts a day.

#### *How the Preserved Milk is made, and what it is for.*

First, it is for all purposes for which milk is desirable where fresh milk cannot be obtained, such as in the camps of our army and on board of ships, or in any other situation where it is necessary to preserve milk for future use, longer than that already described would keep sweet. The "preserved milk" will keep an indefinite length of time. Its period has not yet been determined.

Now, what preserves it? Sugar, simply. Nothing is added in substance or manufacture, but pure, double refined sugar, which has this curious effect upon the milk: it causes it to part with a greater portion of its water, so that a pound of milk and sugar combined actually occupies less space than a pound of milk without sugar. This result, though familiar to the chemist, is curious to the reader who may not be familiar with the fact that a given measure of two substances may be combined and then occupy only the space previously occupied by one.

In the present instance this is thus explained: Of pure milk, of good quality, as drawn from the cow, thirteen per cent. is dry matter. Not such dry matter as cheese, for that contains water—on the average one-third of its weight.

It is ascertained that the sugared milk has parted with eighty per cent. of its matter and that the remaining seven per cent. of water is only just enough to keep the mixture in a semi-liquid condition.

To prove this suppose you take fifty-one ounces of milk and evaporate the water till you have only nine and a quarter ounces of condensed milk, which, combined with six and three-quarters ounces of sugar, would make the pound, which, if then evaporated to a dry powder, weighs fourteen ounces, and shows that only two ounces of water in a pound keeps the

mixture in a plastic form, and in that form is just as well preserved, as in a dry powder, and is much more convenient and less expensive, because it is a very difficult matter to reduce milk to absolute dryness without injury, unless more sugar is added than is necessary or palatable. That was the great objection to "solidified milk." It did not contain less water than preserved milk, but more sugar, which was added to absorb the water, and in that condition was not so well preserved, nor of so good a flavor, nor so convenient for use as it is when about the consistency of cream.

But to return to the process of manufacturing. The sugar is emptied from the barrels into reservoirs, and boiling milk poured upon it till all dissolved, and then it is again strained, making the third time here, and fourth one, counting the straining on the farm. The sugared milk is then drawn up into the vacuum pans, and the process completed as described. The cans of this milk when cooled are taken from the ice bath to the packing-room, and emptied into others set upon stands and provided with stop-cocks, like those called molasses gates, through which the milk, which is of the consistency of thick molasses, is drawn into tin cans, which hold exactly one pound each.

It requires for an average of 8,000 cans a day three girls to fill, and seven to seal them; that is, to solder on the covers over the boles left in the top, through which they are filled by the stream from the cock, at a very rapid rate. An experienced hand will cut off the stream so as not to draw too much or too little, ninety-nine times in a hundred. As she sets the can aside, she gives it a jar to settle the contents, and takes out or adds a little with a teaspoon as required.

The filler sits upon her seat, the empty cans being brought and full ones taken away by an assistant. The sealer stands by a bench, with the cans placed in rows before her. The covers, which have about two inches diameter, are put in place about as fast as a dealer could throw cards. Then she takes her soldering tool in one hand, and a slender bar of solder in the other, from which she melts three drops of solder upon the joint, and then holding the cover with the bar of solder, these drops are rapidly melted around the edge. This work has generated heat enough to expel the slight amount of air under the lid, through a small hole in its centre, which is now instantly closed by a little drop of solder, and the can is then passed to the bench of the labeler, and thence to the packing table, where they are put in deal boxes, generally four dozen in a box, though to fill army orders, a good many have lately been packed in twelve-pound packages.

#### Homburg's Pyrophorus.

Mix equal weights of alum and brown sugar, and stir over the fire until thoroughly dry; then

put in a glass bottle and heat to redness without exposure to the air. It takes fire spontaneously when the air has free access to it.

#### The Thermal Waters of Greece.

An Athens letter says: "Measures are now being adopted in Greece to re-establish the medicinal baths, and turn to account the thermal waters which that country possesses. The baths of Oedipesus, in the island of Eubea, which were formerly so celebrated for their virtues in rheumatism and diseases of the liver, have already been restored. Nearly thirty houses have been already erected around the spring, and a physician resides there during the sea-son."

#### Sale of a Medical College.

The Medical College property of Castleton, Vermont, whence two thousand young doctors have been sent, has been sold, and will be known as a medical college no longer.

#### Dwellings for the Poor in New York.

The matter of improved dwellings for the laboring classes and the poor, is attracting an attention, which, it is to be hoped, will result in good. The manner in which many of the inhabitants of the city live is revolting and seems incredible. The *Citizen*, in a recent number, says that a medical gentleman connected with the association, visited a tenement-house forty feet front, in which one hundred and thirty-four families were living. Is it right to say living? Should it not be written that one hundred and thirty-four families were dying beneath that roof? Can the children in this crowded house stand any chance for their lives?

Another party tells us of visiting a room about twelve feet square, with a bedroom attached, in which he saw at one time no less than thirteen individuals, all breathing the same impure and unwholesome air, while the stench from the accumulated filth in the yard below was intolerable. The family residing in these "apartments" (?) consisted of a widow with a daughter over eighteen years old, and three sons, aged respectively sixteen, fourteen, and eight years, and all occupying the same bed on the floor. The widow took in lodgers, and in one corner of the same floor lay two sisters, who paid two shillings per night for their bed, such as it was, and in another corner, lay the niece of the widow, a married woman, while the dark room was occupied by a man, his wife and three children. Beneath these apartments was a damp cellar, "with ground for the floor," where about a dozen "boarders," men and women, lay like pigs in a sty, and the family who boarded them, consisted of five individuals, making seventeen in all!—*New York Daily Times*.

## The Electric Light.

The *Courrier de Bretagne* gives an interesting account of recent experiments with the electric lights at Lorient, France. The night was dark, many spectators assembled, in addition to the engineers and officers comprising a commission appointed specially by the maritime prefect. First the great dock, in which two ships were under repair, was rendered as light as day, so that the engineers were enabled to go down into it and examine all the details of the repairs. Next a signal mast was fixed at 700 yards from the *Duchayla*, and at 500 yards from the *Panama* steam frigates; the signals given by flags from the summit of the mast were rendered perfectly visible on board the two ships by means of the electric light. A third experiment caused great surprise and admiration. A diver descended 20 feet under water, and by means of the light was enabled to distinguish the decimal divisions on a scale which was sent down to him and to give proofs of it. This experiment was deemed conclusive. It is now established that an electro-magnetic machine may be permanently fixed to light large workshops, submarine works, and narrow passages into harbors. It was further observed that when the light was brought to bear on the water, shoals of fish were attracted by the unusual appearance, and continued to swim around the part lighted. Eels and other fish which were at the bottom of the sea came up to the surface.—*Scientific American.*

## The Sale of Poisons.

Two druggists of this city were yesterday complained of for having violated the statute in reference to the sale of poisons. In one case a young woman named Miss ELLEN HANLEY, residing with her parents at No. 535 Second avenue, sent a child to the drug store of Dr. CHRISTOPHER P. SKELTON to purchase six cents' worth of arsenic, on the pretence that it was wanted to kill rats. Neither the name nor residence of the child was taken by the Doctor, as the law requires. Miss HANLEY received the poison, swallowed it, and died soon after from its effects. The Coroner's Jury rendered a verdict of death by suicide, and censured Dr. SKELTON "for selling poison to a child contrary to law." He was held in \$1,000 bail to answer. The other case was not fatal, but owing to the druggists having sold laudanum without a label, instead of paregoric, as a physician's prescription demanded, the life of a child was placed in jeopardy.—*New York Paper.*

## Dr. Brown Sequard.

We notice by the *Boston Medical and Surgical Journal* that this distinguished gentleman will be prevented by ill health from delivering his course of lectures contemplated in connection with the course of the Boston Medical College this winter.

## Army and Navy News.

## ARMY.

**DEATHS OF MEMBERS OF THE MEDICAL STAFF.**—Whenever surgeons, assistant surgeons, contract physicians, medical cadets, or hospital stewards are killed in battle, or die of wounds or disease, the attending surgeon is ordered to immediately make a special report of the fact to the Surgeon-General.

**EXPIRATION OF SERVICE OF HOSPITAL STEWARDS.**—When hospitals stewards are discharged by expiration of service or other cause, a special report of the fact must be made to the Surgeon-General.

**DEATHS AT NEWBORN, N. C.**—A malignant malarial fever has been prevailing at Newborn, N. C., and proved very fatal. Among the deaths reported are the following: Surgeon James B. Bellangee, U. S. Vols., Ass't Surgeon Brunigan, New York Vols., Hospital Stewards H. S. Rice and W. H. Prime.

**ASSIGNMENTS.**—Surgeon F. A. Keefer, U. S. Vols., is hereby relieved from duty in the Department of the Gulf, and will at the expiration of his leave of absence report to Surgeon R. Murray, U. S. A., Medical Purveyor, Philadelphia, Penna., for duty.

Surgeon John McNulty, U. S. Vols., is hereby relieved from duty in the Department of Missouri, and will at the expiration of his present leave report in person to the commanding General, Department of the East, for duty.

Hospital Steward Charles H. Lewis, detached from the hospital transport *R. C. Wood*, and ordered to General Hospital, Keokuk, Iowa.

Surgeon David Stanton, U. S. Vols., to duty as Assistant Medical Director of the Northern Department of Cincinnati, Ohio, and also as a member of the Army Medical Board, now in session at that place, in the place of Surgeon John F. Head, U. S. A., relieved.

**MISCELLANEOUS.**—Surgeon J. J. Craven, Medical Director of the Tenth Corps, having been on an extensive tour of inspection of hospitals in the West by order of the Surgeon-General, has returned and reentered upon his duties as Medical Director, relieving Surgeon R. K. Smith, who has been acting in his absence. Surgeon Smith returns to the district of Norfolk and Portsmouth as Medical Director on the staff of General Vogdes. Surgeon John H. Janeway, Medical Inspector of the Tenth Corps, who has been absent on similar duty with Surgeon Craven, has also returned to duty on the corps staff.

**EXEMPT FROM DISMISSAL.**—Surgeon Geo. M. Ramsey, 95th N. Y. Vols., having made a satisfactory defence before the Military Commission instituted by Special Order 53 Series of 1863, is exempt from dismissal.

## NAVY.

## Regular Naval Service.

**ORDERED.**—Surgeon Charles Martin to the *Mohican*.

**DETACHED.**—Surgeon John Y. Taylor, from the *Reindeer*, Philadelphia, and ordered to the *Tuscarora*.

**ORDER REVOKED.**—Surgeon S. D. Kennedy, to the *Mohican* and waiting orders.

## Volunteer Naval Service.

**ORDERED.**—Actg Ass't Surgeon Charles Sturtevant to the *Lillian*.

Actg Ass't Surgeon F. M. Lawson to the *A. D. Vance*.

Actg Ass't Surgeon Richard H. Green to the *Secca*,

Actg Ass't Surgeon William D. Hoffman to the Mississippi Squadron.

**DETACHED.**—Actg Ass't Surgeon William H. Holmes, from the *Juka*, and placed on sick leave.

Actg Ass't Surgeon John F. Liscomb, from the *Ohio* and ordered to the *Juka*.

**APPOINTED.**—Actg Ass't Surgeon Henry H. Wilkins, ordered to the West Gulf Squadron.

**RESIGNED.**—Actg Ass't Surgeon Wm. C. Foster, Jr., of the Gen. Thomas, Mississippi Squadron.

Actg Ass't Surgeon S. Andrews Keeler, of the *Somerset*.

## OBITUARY.

## Dr. JOSEPH THOBURN.

At a meeting of the members of the Medical Profession, of Wheeling, held at the Court House, on Saturday evening, the 22d inst., Dr. A. S. Todd was called to the chair, and Dr. J. W. Bates appointed Secretary.

The object of the meeting was stated to be the adoption of resolutions of respect for the character and memory of Dr. JOSEPH THOBURN, late a Colonel in the service of the United States, whereupon the following Preamble and Resolutions were unanimously adopted:

Whereas, It has pleased the All-Wise Disposer of events, to remove from earth, DR. JOSEPH THOBURN, a Colonel in the service of the United States, commanding a Division in the army of West Virginia; and

Whereas, The Medical Fraternity of Wheeling, deeply deplored the loss of a friend and brother, with whom, for many years, they were intimately and agreeably associated in the practice of Medicine, feel it to be due alike to his memory, and to the profession of which he was a member, that we should bear our testimony to the strict integrity, uprightness, and honorable bearing, which at all times characterized him as a man and a Physician; and

Whereas, We feel it also due to his character as a military commander—as a soldier in the cause of the Union—that we should express our admiration of that courage, skill, and unwavering fidelity, with which, on many bloody fields he proved his love for, and devotion to the Union, in the defence of which he sacrificed his life; therefore,

Resolved, That in the death of DR. THOBURN the Medical Profession has lost a member eminently worthy their respect and love; whose sobriety, modesty, skill, kindness and delicacy of feeling, gave evidence of those qualities of mind and heart by which all the best and most eminent men of our Profession have been distinguished.

Resolved, That by the decease of COL. THOBURN the country has lost a citizen who was indeed a patriot,—intelligent, unselfish and true; zealously devoted to those great principles which have brought to us inestimable blessings; and privileges, which we can only hope to preserve by the perpetuity of the Union,—and the Army has lost a brave, gallant, and skillful officer, who, had his life been spared, there is every reason to believe, would have fully justified the high opinion entertained of him by those who knew him best, and who had watched with interest the progress of his military career.

Resolved, That a copy of the foregoing preamble and resolutions be presented to the family of the deceased, and furnished for publication to the city papers.

Dr. Hupp having read to the meeting some memoranda embracing the chief incidents in the life of the deceased, it was

Resolved, That he be requested to use them in preparing a brief biographical sketch of COL. THOBURN for publication.

A. S. TODD, Chairman.

W. J. BATES, Sec'y.

#### DR. WILLIAM PEPPER.

At a meeting of the Committee appointed by the Medical Class of the University of Pennsylvania, to embody in befitting resolutions their sentiments relative to the decease of the late Professor WILLIAM PEPPER, the following were unanimously adopted:—

Whereas, It has pleased Almighty God in His wise providence to remove from our midst our former instructor, Prof. WILLIAM PEPPER, therefore,

Resolved, That while we bow in humble submission to the will of a just Providence, yet we cannot forbear the expression of our grief that such an untimely termination should have been given to his life of eminent usefulness. That we remember with feelings of appreciation and gratitude, his connection with us as a teacher, a friend and a guide, and that in his death we are called to mourn the departure of a life that should be emulated by all, but can be reached by but few.

Resolved, That we tender to the family of the deceased, our heart-felt sympathies, and that a committee of four be appointed to represent the Class at the funeral.

Resolved, That a copy of these resolutions, properly attested, be sent to the family, and, also, that they be submitted for publication.

CHAS. H. THOMAS, Chairman.

GEO. STRAWBRIDGE, Sec'y.

THAD. L. LEAVITT,  
HENRY M. STILLE,  
HERBERT M. HOWE,  
GEO. T. TOWNSEND,  
HORACE WILLIAMS,  
Committee.

#### MARRIED.

CHILD—PETERSON.—On Thursday morning, October 13th, in this city, by the Right Rev. Alonzo Potter, George W. Childs, Esq., and Emma Bouvier, daughter of R. E. Peterson, M. D.

FORRESTER—CHRISTIE.—On Wednesday, Oct. 19th, at the residence of the bride's father, by the Rev. Dr. De Baan, Dr. James Forrester, Jr., and Maggie A. Christie, daughter of Henry Christie, Esq., all of New York.

HERTER—MILES.—On Thursday October 20th, at the residence of the bride's father, Gleuville, Conn., by the Rev. Dr. Yarrington, Christian Hertter, of New York, and Mary, daughter of Dr. Archibald Miles.

KITTREDGE—CHASE.—On Thursday Oct. 20th, at the house of the bride's father, Haverhill, Mass., by the Rev. C. B. Kittredge, of Westboro', Dr. C. S. Kittredge, of New York City, and Miss A. M. Chase, of Haverhill.

SMITH—HAZARD.—On the 19th inst., by the Rev. Dr. Sanson, Dr. T. C. Smith, and Miss Cornelia F. Hazard, both of Washington City.

SPENCE—LOUGHBRIDGE.—On the 5th instant, at the Presbyterian Church, Dunbar, Ireland, by the Rev. Wm. Magill, assisted by the Rev. H. Hanna, Robert Spence, M. D., of the Twenty-third Bengal Infantry, and Anna Sinclair, daughter of the late Rev. Wm. Loughridge, of Philadelphia.

#### DIED.

DEERING.—On Sunday, August 23rd, suddenly, at Carrollton, La., Roger M. Deering, M. D., Assistant Surgeon 98th U. S. Cavalry Brigade, formerly of Brooklyn, N. Y. Also, suddenly, at Pensacola, Fla., on Saturday, Oct. 1, his brother, Henry Livingston Deering, M. D., Acting Assistant Surgeon, attached to U. S. Steamer *Genesee*, formerly of Boston, Mass. When urged by his brother Surgeon to go home, his patriotic reply was, "No, I am needed here, and will die at my post."

JOCLYN.—On Monday, Oct. 18th, at his residence in Springfield, Mass., Cornelius B. Jocelyn, M. D., of Brooklyn, N. Y., aged 26 years.

MC EWEN.—On Tuesday, Oct. 18, at Stratford Conn., Robert Douglas, infant son of Robert C. McEwen, M. D.

PREScott.—On the 5th of October, at Farmington Maine, Josiah Prescott, M. D. at the age of 79.

SAYER.—As Dr. L. P. Sayer, a well-known and respected physician in Denmark, Maine, was riding in his carriage on the 10th instant, some portion of his harness gave way, and his horse became unmanageable, throwing him out and injuring him internally, so as to cause his death in a few hours. He had been a resident of Denmark about forty years, and will be deeply lamented by the whole community.

#### METEOROLOGY.

October.	17.	18.	19.	20.	21.	22.	23.
Wind.....	W.	N. W.	W.	N. W.	W.	N. W. N. W.	
Weather ...	Clear.	Clear.	Clear.	Clear.	Clear.	Cl'dy.	Rain.
Depth Rain...						1-16	
Thermometer							
Minimum.....	38°	40°	37°	30°	40°	40°	37°
At 8 A. M.....	49	47	47	48	50	45	47
At 12 M.....	58	62	55	56	58	46	53
At 3 P. M.....	60	63	56	56	57	46	54
Mean.....	51.25	52.75	52.00	47.50	50.75	44.25	45.25
Barometer.							
At 12 M.....	30	29.9	29.8	30	30.1	29.8	29.5

Germantown, Pa.

B. J. LEEDS.

#### WANTED.

Subscribers having any of the following numbers to spare will confer a favor, and likewise be credited on their running subscriptions, with such as they may return us.

- Vols. I, II, III & IV. All the numbers.
- Vol. V. No. 1, Oct. 6, '60; No. 18, Feb. 9, '61.
- " VI. Nos. 18, 19, Aug. 3, '61.
- " VII. Nos. 1, 2, 6, Oct. 5, 12, Nov. 9, '61; Nos. 10 to 12, Dec. 7, '61, to March 8, '63.
- " VIII. Nos. 17, 18, 19, 22, 23, July 26, Aug. 2, 9, 30, Sept. 6, '62.
- " IX. Nos. 6, 7, 8, 13 & 14, 17 & 18, Nov. 8, 15, 22, 1 Dec. 27, '62 & Jan. 3, '63, Jan. 24 & 31, '63.
- " XI. Nos. 1, 3, 4, 5, 7, 11, 21, Jan. 2, 16, 23, 30, Feb. 13, March 12, May 21, '64.